KIDD ISLAND BAY WATER USERS SOURCE WATER ASSESSMENT REPORT(PWS1280104)

January 2, 2001



State of Idaho Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on the data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the state of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area, sensitivity factors associated with the wells, and aquifer characteristics.

This report, *Source Water Assessment for Kidd Island Bay Water Users*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

Kidd Island Bay Water Users drinking water quality is generally good. In 1999 the system began pumping ground water from a well field at the head of Kidd Island Bay. It had previously relied on surface water from Lake Coeur d'Alene. The unregulated contaminant manganese is present in the well water in concentrations exceeding the Maximum Contaminant Level. Detection of bacteria during routine monitoring in February 2000 was apparently due to an error in sampling technique.

Wells in the Kidd Island Bay Water Users system are located in the 100 year flood plain for Lake Coeur d'Alene and draw their water from a shallow, confined Columbia River Basalt aquifer. The recharge zone for the wells is in a relatively undeveloped rural area where few potential contaminant sites have been identified. A susceptibility analysis conducted by DEQ October 19, 2000, ranked the wells moderately susceptible to inorganic chemical (IOC), organic chemical (SOC, VOC) and microbial contamination. Geologic factors correlated with the wells' location account for most of the vulnerability to contamination.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For Kidd Island Bay Water Users, source water protection activities should focus first on maintaining a fenced area immediately around the wells to keep wildlife, livestock and any hazardous materials away from the wells. The next priority should be to work with private landowners and public agencies to regulate land use in zones contributing water to the wells but further from the wellhead. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities related to agriculture should be coordinated with the Idaho Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

SOURCE WATER ASSESSMENT FOR KIDD ISLAND BAY WATER USERS

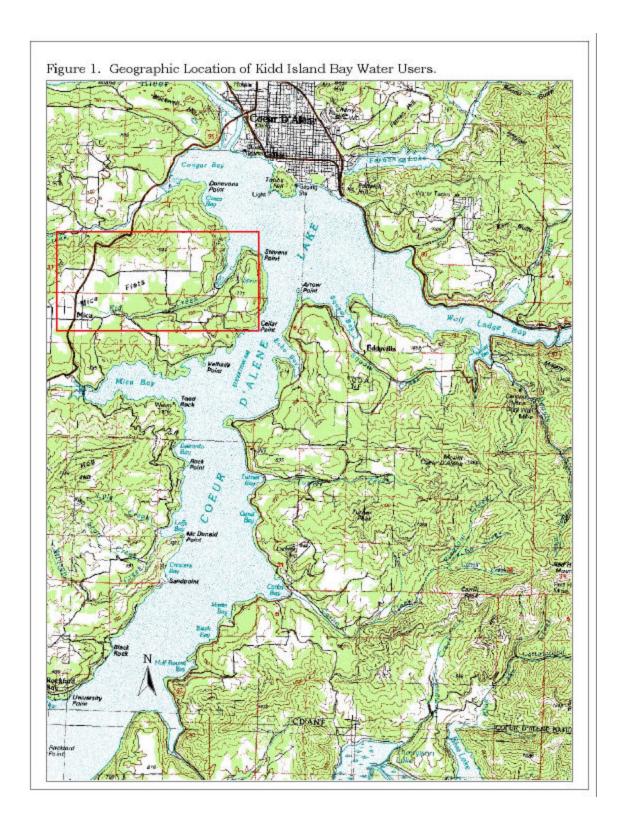
Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. It is important to review this information to understand what the ranking of this source means. A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings, used to develop this assessment, is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.

The ultimate goal of this assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.



Section 2. Conducting the Assessment

General Description of the Source Water Quality

Kidd Island Bay Water Users serves a community of approximately 125 people, located in the rural residential area surrounding Kidd Island Bay on Lake Coeur d'Alene. (Figure 1). Public drinking water for Kidd Island Bay Water Users comes from two wells that tap a confined Columbia River Basalt aquifer. Because the wells are so close together, they are considered a well field. The primary water quality issue currently facing Kidd Island Bay Water Users is that of manganese contamination and the problems associated with managing this contamination. Results of a comprehensive water quality test conducted on the water from Well#1 before it was put into use are summarized on Table 1.

Table 1. Inorganic Chemical Contaminants Detected in Well #1

Contaminant	MCL*	Amount Detected	Date
Barium	2.0 mg/l	0.01 mg/l	10/29/98
Fluoride	4.0 mg/l	0.6 mg/l	10/29/98
Iron	0.30 mg/l	0.08 mg/l	10/29/98
Manganese	0.05 mg/l	0.08 mg/l	10/29/98
Total Dissolved Solids	500 mg/l	128.0 mg/l	10/29/98

^{*}Maximum Contaminant Level

Bacteria were detected in a water sample tested in February 2000, but were absent in subsequent tests. Nitrate (MCL=10 mg/l) was present at a concentration of 0.011 mg/l in a sample taken in April 2000. Radiological contaminants at concentrations below the Maximum Contaminant level were detected in 1999 and 1999.

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. For wells, the process includes mapping the boundaries of the zone of contribution into time of travel zones indicating the number of years necessary for a particle of water to reach a well. DEQ used a refined computer model approved by the EPA in determining the three-year 1B), six-year and ten-year time-of-travel (TOT) for water associated with the shallow, confined Columbia River Basalt aquifer in the vicinity of Kidd Island Bay. The computer model used site-specific data, including local well logs, assimilated by DEQ from a variety of sources.

The 1650-acre source water protection delineation for Kidd Island Bay Water Users is a corridor 4.5 miles long with a maximum width of about 3/4-mile. It stretches westward from the bay following the course of Kidd Creek, and crosses Highway 95 on Mica Flats (Figure 2). The actual data used by DEQ in determining the source water assessment delineation areas are available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

Kidd Island Bay Water Users serves a rural residential community around Kidd Island Bay. There are 59 connections on the system serving an estimated 125 people. The well field is situated adjacent to the county road at the head of the bay. Kidd Island Bay Water Users own the well lot. Land covered by the source water assessment area is privately owned. The area near the bay is a wooded rural residential area. The Mica Flats area is less densely developed and is farmed. Part of the source water assessment area intersects a wastewater land application site.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the <u>potential</u> for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A contaminant inventory of the study area conducted by DEQ involved identifying and documenting potential contaminant sources within the Kidd Island Bay Water Users Source Water Assessment Area through the use of computer databases and Geographic Information System maps developed by DEQ. There are two potential contaminant sites located in the delineated area for the well field, a wastewater land application site and a cabinet shop (Figure 2). Table 2 lists the potential contaminants of concern, time of travel zones, and information source.

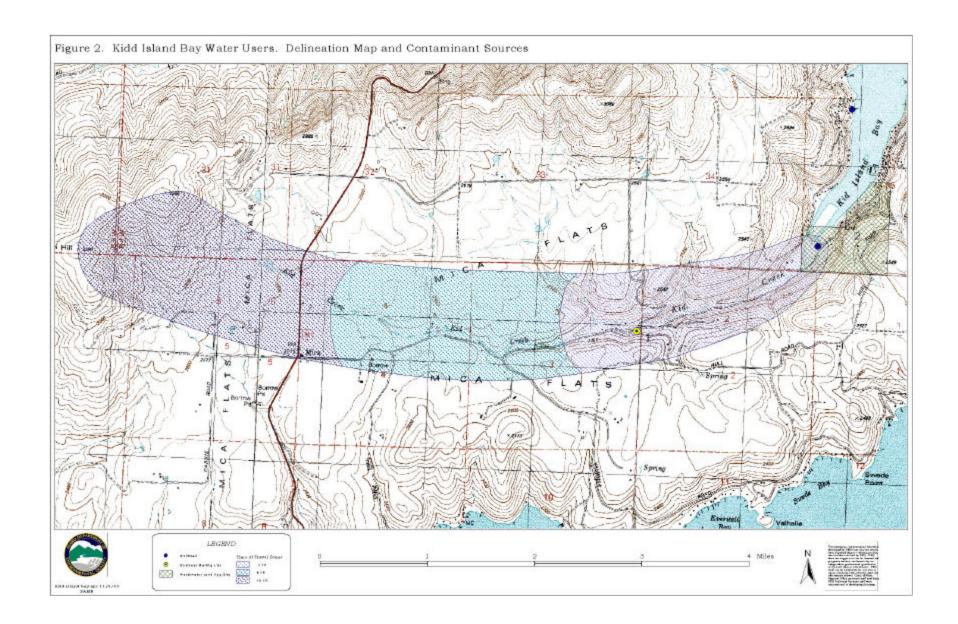


Table 2. Kidd Island Bay Water Users Potential Contaminant Inventory

MAP ID	DESCRIPTION	TOT	POTENTIAL CONTAMINANT	SOURCE OF INFORMATION
		ZONE:		
1	CABINET SHOP	3 YR	VOC	BUSINESS MAILING LIST
2	WASTEWATER LAND	3 YR	MICROBIAL	WLAP DATABASE
	APPLICATION SITE			

WLAP=WASTEWATER LAND APPLICATION

TOT = time of travel (in years) for a potential contaminant to reach the wellhead

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 3. Susceptibility Analyses

The susceptibility of the sources to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The susceptibility analysis worksheets for your wells are on pages 16 and 17 of this report.

Hydrologic Sensitivity

Hydrologic sensitivity was moderate for the well field. The soils in the area around the well are classified as "moderately to well drained" which indicates an open soil structure. The drainage class relates to leachability of contaminants through the soil profile. The wells are situated in an area where the depth to ground water is less than 300 feet.

Well Construction/Intake Construction

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a system that can better protect the water. The Kidd Island Bay Water Users well field had moderate system construction scores. The wells, 104 and 130 feet deep, are located in the 100-year flood plain. Both are completed in a layer of fractured basalt. Well #1 has a 8-inch casing, 0.25 inches thick, that extends 54 feet below ground surface. The inner casing is 6 inches in diameter, 0.25 inches thick, and extends to a depth of 80 feet. The surface seal for the well is bentonite clay and terminates at 54 feet in a basalt interbed. From 80 to 100 feet the well has a stainless steel screen.

The casing for well #2 is 8 inch diameter steel, 0.322 inches that extends to a depth of 124 feet. From 125 feet to 130 feet the well is screened. The bentonite clay surface seal extends to a depth of 55 feet.

The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules* (1993) require all public water systems to follow DEQ standards. IDAPA 58.01.08.550 requires that public water systems follow the *Recommended Standards for Water Works* (1997) during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works* (1997) states that 6-inch steel casing requires a thickness of 0.28 inches.

Potential Contaminant Source and Land Use

Potential contaminant source/land use scores for the wells were low for IOCs, SOCs, VOCs and microbials. Because manganese is an unregulated contaminant, its presence in the water was not factored into the susceptibility analysis.

Final Susceptibility Ranking

The final ranking for vulnerability to all classes of potential contaminants was moderate. Hydrologic sensitivity and system construction scores added the most points to the final microbial, IOC,SOC and VOC susceptibility rankings. The susceptibility analysis for all Kidd Island Bay Water Users is summarized in Table 3.

Table 3. Summary of Kidd Island Bay Water Users Susceptibility Evaluation

Susceptibility Scores ¹										
Well	Hydrologic	Contaminant			System	Final Susceptibility Ranking				
	Sensitivity	Inventory			Construction					
		IOC	VOC	SOC	Microbials		IOC	VOC	SOC	Microbials
Well #1	3	0	3	0	2	4	M	M	M	M
Well #2	4	0	3	0	2	3	M	M	M	M

¹H = High Susceptibility, M = Moderate Susceptibility, Low Susceptibility

Susceptibility Summary

Kidd Island Bay Water Users drinking water quality is generally good. Detection of bacteria during routine monitoring in February 2000 was apparently related to an error in sampling technique. Wells in the Kidd Island Bay Water Users system are located in the 100 year flood plain for Lake Coeur d'Alene and take their water from a shallow, confined Columbia River Basalt aquifer. The recharge zone for the wells is in a relatively undeveloped rural area where few potential contaminant sites have been identified.

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

²H* - Indicates source automatically scored as high susceptibility due to presence of either a VOC, SOC or an IOC above the maximum contaminant level in the tested drinking water, or the presence of a significant contaminant source within 1000 feet of a surface water intake.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For Kidd Island Bay Water Users, source water protection activities should focus first on maintaining a fenced area immediately around the wells to keep wildlife, livestock and any hazardous materials away from the well. The next priority should be to work with private land owners and public agencies to regulate land use in the 3, 6 and 10-year time of travel zones contributing water to the wells. Public education and source water protection activities such as household hazardous waste collection should also be included in the program. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities related to agriculture should be coordinated with the Idaho Department of Agriculture, the Soil Conservation Commission, the local Soil Conservation District, and the Natural Resources Conservation Service.

Assistance

Public water supplies and others may call the following DEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the DEQ office for preliminary review and comments.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State DEQ Office (208) 373-0502

Website: http://www.deq..state.id.us

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at 1-800-962-3257 for assistance with wellhead protection strategies.

References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

Ackerman, D.J., 1995, Analysis of Steady-State Flow and Advective Transport in the Eastern Snake River Plain Aquifer System, Idaho, U.S.G.S Water-Resources Investigations Report 94-4257, 25 p.

Alt, David & Hyndman, Donald 1989, Roadside Geology of Idaho, Mountain Press Publishing Co., Missoula, MT

Bradbury, K.R., Muldoon, M.A., Zaporozec, A., and Levy, J., 1991, Delineation of Wellhead Protection Areas in Fractured Rocks: U.S. Environmental Protection Agency, Office of Ground Water and Drinking Water, Ground-Water Protection Division, EPA 570/9-91-009, 144 p.

Barker, R.A., 1979, Computer Simulation and Geohydrology of a Basalt Aquifer System in the Pullman-Moscow Basin of Washington and Idaho, Washington Dept. of Ecology Water-Supply Bulletin 48, 119p.

Cohen, P.L., and Ralston, D.L., 1980, Reconnaissance Study of the "Russell" Basalt Aquifer in the Lewiston Basin of Idaho and Washington, IWRRI Research Technical Completion Report, 165p.

Fetter, C.W., 1988, Applied Hydrogeology, Macmillian Publishing Co., New York, 592 p.

Hobbs, S.W., Griggs, A.B., Wallace, R.E., and Campbell, A.B., 1965, Geology of the Coeur d'Alene District, Shoshone County, Idaho: U.S. Geological Survey Professional Paper 478, 139 p.

Kunkel, Douglas, 1993, Characterization of the Upper Aquifer Beneath Smelterville Flats with Implications for Migration of Ground Water Contamination, University of Idaho, M.S. Thesis

Lum, W.E., Smoot, J.L., and Ralston, D.L., 1990, Geohydrology and Numerical Analysis of Ground-Water Flow in the Pullman-Moscow Area, Washington and Idaho, U.S. Geological Survey Water-Resources Investigation Report 89-4103, 73p.

Piske, Brad, 1990, Hydrogeologic Evaluation of Tailing Deposits at the Coeur d'Alene River Delta, University of Idaho, M.S. Thesis

Sowards-Willoghby, J.K., 1986, Geology of Prichard Formation and Ravalli Group Rocks in the SE ¼ of the Kellogg 14' Quadrangle, Shoshone County, Idaho, University of Idaho, M.S. Thesis

Spruill, T.B., 1993, Preliminary Evaluation of Hydrogeology and Ground-Water Quality in Valley Sediments in the vicinity of Killarney Lake, Kootenai County, Idaho, U.S. Geological Survey, Water-Resource Investigations Report 93-4091, 41p.

Swope, Stephen P., 1990, Analysis of Ground Water Quality and Water Level Data and the Effects of Recharge on the Ground Water Quality at Smelterville Flats, Idaho, University of Idaho Graduate School.

Vance, R.B., 1981, Geology of the NW 1/4 of the Wallace 15' Quadrangle, Shoshone County, Idaho: Moscow, University of Idaho, M.S. Thesis, 103 p.

Willoughby, J.K.S., 1986, Geology of Prichard Formation and Ravalli Group Rocks in the SE 1/4 of the Kellogg 15' Quadrangle, Shoshone County, Idaho: Moscow, University of Idaho, M.S. Thesis, 155 p.

Wyman, S.A., 1993, The Potential for Heavy Metal Migration From Sediments of Coeur d'Alene Lake into the Rathdrum Prairie Aquifer, Kootenai County, Idaho; University of Idaho M.S. Thesis, 141p.

Electronic References:

http://www.wrcc.sage.dri.edu/pcpn/id.gif, Average Annual Precipitation, Idaho, 1961-1990

Derkey, P.D., Johnson, B.R., Carver, M., 1996, Digital Geologic Map of the Coeur d'Alene District, Idaho and Montana, U.S. Geological Survey Open-File Report 96-299. http://www.wrgis.wr.usgs.gov/doc/northwest_region/96-299.pdf

Attachment A

Kidd Island Bay Water Users Susceptibility Analysis Worksheet The final scores for the susceptibility analysis for Kidd Island Bay Water Users wells were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

- 0 5 Low Susceptibility
- 6 12 Moderate Susceptibility
- > 13 High Susceptibility

Ground Water Susceptibility

Ground Water Susceptibility					
Public Water System Name :	KIDD ISLAND BAY WATER USERS	Source			
Public Water System Number:	1280104	11/2/0	0 11:49:23 AM	i	
1. System Construction		SCORE			
Drill Date	9/25/98				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	NO	0			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		3			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A		Score	Score	Score	Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	0	1	0	1
(Score = # Sources X 2) 8 Points Maximum		0	2	0	2
Sources of Class II or III leacheable contaminants or Microbial	s YES	0	1	0	
4 Points Maximum		0	1	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	3	0	2
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbial	s NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbial	s NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	3	0	2
4. Final Susceptibility Source Score		7	8	7	8
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

Ground Water Susceptibility

		_			
Public Water System Name :	KIDD ISLAND BAY WATER USERS	Source			
Public Water System Number :	1280104		0 11:49:43 AM		
1. System Construction	T/20/00	SCORE			
Drill Date	7/20/99				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	NO	0			
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	NO	1			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		3			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		4			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A		Score	Score	Score	Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	0	1	0	1
(Score = # Sources X 2) 8 Points Maximum		0	2	0	2
Sources of Class II or III leacheable contaminants or Microbials	s YES	0	1	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	3	0	2
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	s NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	s NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	2	0	2
4. Final Susceptibility Source Score		7	8	7	8
5. Final Well Ranking		Moderate	Moderate		Moderate

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

<u>AST (Aboveground Storage Tanks)</u> – Sites with aboveground storage tanks.

<u>Business Mailing List</u> – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

<u>CERCLIS</u> – This includes sites considered for listing under the <u>Comprehensive Environmental Response</u> Compensation and Liability Act (CERCLA). CERCLA, more commonly known as ASuperfund@is designed to clean up hazardous waste sites that are on the national priority list (NPL).

<u>Cyanide Site</u> – DEQ permitted and known historical sites/facilities using cyanide.

<u>Dairy</u> – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

<u>Deep Injection Well</u> – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

<u>Group 1 Sites</u> – These are sites that show elevated levels of contaminants and are not within the priority one areas.

<u>Inorganic Priority Area</u> – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

<u>Landfill</u> – Areas of open and closed municipal and non-municipal landfills.

<u>LUST (Leaking Underground Storage Tank)</u> – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

<u>Mines and Quarries</u> – Mines and quarries permitted through the Idaho Department of Lands.)

<u>Nitrate Priority Area</u> – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

<u>Organic Priority Areas</u> – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

<u>RICRIS</u> – Site regulated under <u>Resource Conservation</u> <u>Recovery Act (RCRA)</u>. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

<u>UST (Underground Storage Tank)</u> – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

<u>Wastewater Land Applications Sites</u> – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

<u>Wellheads</u> – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.